



PATENT
678503-2002.3
USSN 10/668,453

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : David T. CURIEL
Serial No. : 10/668,453
For : CAPSID-MODIFIED RECOMBINANT ADENOVIRUS AND
METHODS OF USE
Filed : September 23, 2003
Examiner : Nguyen, Quang
Art Unit : 1636

745 Fifth Avenue
New York, NY 10151

EXPRESS MAIL

Mailing Label Number: **EV206804655 US**

Date of Deposit: **OCTOBER 11, 2004**

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" Service under 37 CFR 1.10 on the date indicated above and is addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Adam Ahmed
(Typed or printed name of person mailing paper or fee)

[Signature]
(Signature of person mailing paper or fee)

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §§ 1.97(b)(3) AND 1.98

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Examiner's attention is respectfully drawn to the enclosed documents listed on the accompanying PTO Form 1449. In accordance with C.F.R. § 1.98(d), no copy of those documents previously submitted to or cited by the USPTO in predecessor application Serial No. 09/668,791, filed September 22, 2000, now U.S. Patent No. 6,555,368 (i.e., references AA-AC

and AE-AS) and predecessor application Serial No. 10/424,409 filed April 28, 2003, (i.e., reference AD) of which this application is a continuation in part, is submitted herewith. Copies of references AT-BO are submitted herewith.

Pursuant to 37 CFR §1.97(b)(3), Applicants request the Examiner to consider this Information Disclosure Statement, and to make of record the documents cited on the accompanying PTO form 1449 and that a copy of Form PTO-1449 be initialed by the Examiner and returned to the undersigned.

The filing of this Information Disclosure Statement is not an admission that the documents identified herein constitute prior art to the present application.

It is believed that no fees are required by the instant submission as it is prior to receipt of the first Office Action on the merits. However, if any fees are required, or if any overpayment has been made, please charge Deposit Acct. No. 50-0320.

Respectfully submitted,
FROMMER LAWRENCE & HAUG LLP

By:



Thomas J. Kowalski

Reg. No. 32,147

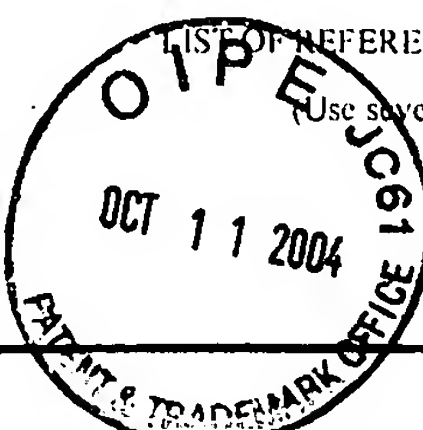
Deborah L. Lu

Reg. No. 50,940

Tel. No. (212) 588-0800

Fax No. (212) 588-0500

Encs. PTO Form 1449
References (21)

Based on Form PTO-1449 (3/90)				ATTY. DOCKET NO. <div style="text-align: center;">678503-2002.3</div>		SERIAL NO. <div style="text-align: center;">10/668,453</div>	
<div style="text-align: center;">  </div> LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)				APPLICANT <div style="text-align: center;">David T. CUIEL</div>			
				FILING DATE <div style="text-align: center;">September 23, 2003</div>		GROUP <div style="text-align: center;">1636</div>	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	AA	5,723,287	Russell et al.				
	AB	5,846,782	Wickham et al.				
	AC	5,871,727	Curiel				
	AD	6,740,525	Roelvink et al.				

FOREIGN PATENT DOCUMENTS							
DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
					YES	NO	
AE	GB 99/36545	07/99	Great Britain				

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
AF		Curiel, D. et al., "Strategies to Adapt Adenoviral Vectors for Targeted Delivery," Ann. NY Acad. Sci., 886: 158-71, 1999
AG		Dang et al., "Gene Therapy and Translational Cancer Research," Clinical Cancer Research, 5: 471-74, 1999
AH		Deonarain, "Ligand-Targeted Receptor-Mediated Vectors for Gene Delivery," Exp. Opin. Ther. Patents, 8(1): 53-69, 1998
AI		Douglas, J. et al., "A system for the propagation of adenoviral vectors with genetically modified receptor specificities," Nat. Biotechnol., 17: 470-75, 1999
AJ		Krasnykh, V. et al., "Generation of Recombinant Adenovirus Vectors with Modified Fibers for Altering Viral Tropism," J. Virol., 70: 6839-46, 1996
AK		Manuel Rosa-Calatrava et al., "Functional Analysis of Adenovirus Protein IX Identifies Domains Involved in Capsid Stability, Transcriptional Activity, and Nuclear Reorganization," J. Virol., 75: 7131-41, 2001
AL		Meng et al., "Tumor Suppressor Genes as Targets for Cancer Gene Therapy," Gene Therapy of Cancer, 3-20, 1999
AM		Miller et al., "Targeted Vectors for Gene Therapy," FASEB J., 9: 190-99, 1995
AN		Ngo et al., "Computational Complexity, Protein Structure Prediction, and the Levinthal Paradox," In: Protein Folding Problem and Tertiary Structure Prediction (Merz et al., eds.), Birkhauser, Boston, pp. 419-94, 1994
AO		Peng et al., "Viral Vector Targeting," Current Opinion in Biotechnology, 10: 454-57, 1999
AP		Rudinger, "Characteristics of the Amino Acids as Components of a Peptide Hormone Sequence," In: Peptide Hormones (Parsons, J.A., ed.), University Park Press, Baltimore, pp. 1-7, 1996
AQ		Verma, et al., "Gene Therapy-Promises, Problems and Prospects," Nature, 389: 239-42, 1997
AR		Wickham, T. et al., "Targeted Adenovirus Gene Transfer to Endothelial and Smooth Muscle Cells by Using Bispecific Antibodies," J. Virol., 70: 6831-38, 1996
AS		Wickham, T. et al., "Targeted Adenovirus-Mediated Gene Delivery to T Cells via CD3," J. Virol., 71: 7663-69, 1997
AT		Balague C et al., Human papillomavirus E6E7-mediated adenovirus cell killing: selectivity of mutant adenovirus replication in organotypic cultures of human keratinocytes. J Virol. 75:7602-11 (2001).
AU		Bevis and Glick, Rapidly maturing variants of the Discosoma red fluorescent protein (DsRed). Nat Biotechnol. 20:83-7 (2002).
AV		Bhaumik and Gambhir, Optical imaging of Renilla luciferase reporter gene expression in living mice. Proc Natl Acad Sci USA. 99:377-82 (2002).
AW		Burbelo et al., Detecting protein-protein interactions using Revilla luciferase fusion proteins. Biotechniques 33:1044-8, 1050 (2002).
AX		Campbell et al., A monomeric red fluorescent protein. Proc Natl Acad Sci USA. 99:7877-82 (2002).
AY		Chartier et al., Efficient generation of recombinant adenovirus vectors by homologous recombination in Escherichia coli. J. Virol. 70:4805-4810 (1996).
AZ		Chaudhuri et al., A noninvasive reporter system to image adenoviral-mediated gene transfer to ovarian cancer xenografts. Gynecol Oncol. 83:432-8 (2001).

	BA	Chaudhuri et al., Light-based imaging of green fluorescent protein-positive ovarian cancer xenografts during therapy. <i>Gynecol Oncol.</i> 82:581-9 (2001).
	BB	Diehn et al., Noninvasive fluorescent imaging reliably estimates biomass in vivo. <i>Biotechniques</i> 33:1250-2, 1254-5 (2002).
	BC	Dmitriev et al., Engineering of adenovirus vectors containing heterologous peptide sequences in the C terminus of capsid protein IX. <i>J Virol.</i> 76:6893-9 (2002).
	BE	Gross et al., The structure of the chromophore within DsRed, a red fluorescent protein from coral. <i>Proc Natl Acad Sci USA.</i> 97:11990-5 (2000).
	BG	Gurskaya et al., GFP-like chromoproteins as a source of far-red fluorescent proteins. <i>FEBS Lett.</i> 507:16-20 (2001).
	BH	He et al., A simplified system for generating recombinant adenoviruses. <i>Proc Natl Acad Sci USA.</i> 95:2509-14 (1998).
	BI	Hoffman, Visualization of GFP-expressing tumors and metastasis in vivo. <i>Biotechniques</i> 30:1016-22, 1024-6 (2001).
	BJ	Ilyin et al., Fiber-optic monitoring coupled with confocal microscopy for imaging gene expression in vitro and in vivo. <i>J Neurosci Methods</i> 108:91-6 (2001).
	BK	Rooney et al., Laser fluorescence bronchoscopy for detection of fluorescent reporter genes in airway epithelia. <i>Gene Ther.</i> 9:1639-44 (2002).
	BL	Wang et al., Renilla luciferase-Aequorea GFP (Ruc-GFP) fusion protein, a novel dual reporter for real-time imaging of gene expression in cell cultures and in live animals. <i>Mol Genet Genomics</i> 268:160-8 (2002).
	BM	Weissleder and Mahmood, Molecular imaging. <i>Radiology</i> 219: 316-33 (2001).
	BN	Yanamoto et al., Infectivity Enhanced, Cyclooxygenase-2 Promoter-Based Conditionally Replicative Adenovirus for Pancreatic Cancer. <i>Gastroenterology.</i> 125(4):1203-18 (2003).
	BO	Yang et al., Whole-body optical imaging of green fluorescent protein-expressing tumors and metastases. <i>Proc Natl Acad Sci USA.</i> 97:1206-11 (2000).
		Yang et al., Visualizing gene expression by whole-body fluorescence imaging. <i>Proc Natl Acad Sci USA</i> 97:12278-82 (2000).
		Yang et al., Direct external imaging of nascent cancer, tumor progression, angiogenesis, and metastasis on internal organs in the fluorescent orthotopic model. <i>Proc Natl Acad Sci USA.</i> 99:3824-9 (2002).
EXAMINER		DATE CONSIDERED
<p>* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		